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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,844	05/16/2001	Manami Kuiseko	325772022100	9179

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EXAMINER

COLAIANNI, MICHAEL

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 04/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/855,844

Applicant(s)
Kuisseko et al.

Examiner
Michael Colaianni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on May 16, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 16-19 is/are rejected.
- 7) ☒ Claim(s) 7-15 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1, 3-5 are rejected under 35 U.S.C. 103(a) as obvious over Morse 3588440.

Morse teaches positioning a workpiece in a holder (Fig. 1, ref. no. 12) and using two conjugately positioned lasers to form holes in a workpiece (Fig. 1, col. 3, lines 27-32). Morse also teaches that the first and second light sources are focused on the same point (Fig. 1, ref. no. 24). Morse also teaches that the second light source has a shorter wavelength than the first

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light source (col. 3, lines 13-25). Morse also teaches that the hole is formed by vaporizing the film using energy generated at the point of the condensed luminous flux (col. 3, lines 27-32, Fig. 1).

Though Morse does not teach that the workpiece is a near field light generating element having a film thereon, it would have been obvious to use such an element as the workpiece because Morse does not restrict or otherwise limit the composition of the workpiece. Also, since the laser is used to form holes (i.e. completely through the workpiece) the forming of holes in a coating would have been obvious because Morse teaches forming holes in and cutting the substrate.

It would have been prima facie obvious at the time the invention was made to use a near field generating element as the workpiece and to form holes in a coating thereon with Morse's method of forming holes in a workpiece for the reasons given in the body of this rejection.

4. Claims 2, 3, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morse 3588440.

Morse substantially teaches applicant's claimed invention. See the §103(a) rejection for Morse's teachings. However, Morse does not teach forming a reflecting film, light intercepting film, a heat absorbing film or a super resolution film on the workpiece; or the generating element being a solid immersion mirror or a solid immersion lens.

However, Morse does teach that workpiece may consist of any sort of material (col. 2, lines 26-36. The material referred to is only exemplary and is not limiting. The only requirement is that the workpiece material absorb the wavelength of the laser used.). Moreover, Morse teaches

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that holes are formed in the workpiece so as to "cut" the workpiece (col. 3, lines 26-32). Given Morse's teaching that holes are formed so as to cut the workpiece (i.e. that holes are formed such that they extend all the way through the workpiece) the particular coating applied could obviously be any type of coating. Thus, using a reflective, light intercepting, heat absorbing or super resolution coating would have been obvious. Moreover, because Morse's material must absorb the laser light, using a heat absorbing film/coating would have been obvious. Also, using a solid immersion mirror or a solid immersion lense as the "workpiece" would have been obvious given Morse's teaching that any particular material may be used as the workpiece as long as it absorbs the laser light.

It would have been prima facie obvious at the time the invention was made to use a reflective or light absorbing coating and a solid immersion mirror or lense with Morse's method of forming holes in a workpiece for the reasons given in the body of the rejection.

Allowable Subject Matter

5. Claims 7-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: none of the prior art taught or fairly suggested a method of manufacturing an optical head having a

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near-field light generating element the condenses a luminous flux on an exit surface using a solid immersion mirror having the characteristics claimed in claim 7, 11 and 13.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Colaianni whose telephone number is 703-305-5493. The examiner can normally be reached on Monday to Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin, can be reached on (703) 308-1164. The fax phone number for the organization where this application or proceeding is assigned is 703-305-7115.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



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April 22, 2003

**MICHAEL COLAIANNI
PRIMARY EXAMINER**